

2. Board-like rigidity and exquisite tenderness over the involved area, as a rule.
3. Increase in liver dullness.
4. Dullness in flanks, if there is marked hemorrhage.
5. Shock due to the impact or due to flooding of peritoneal cavity with blood and bile.
6. Sharp rise in white blood cells and fall in red blood cells.
7. Jaundice: This is of relatively late development, coming on two to three days after injury.

TREATMENT

The treatment of diagnosed or strongly suspected rupture of the liver is immediate laparotomy with repair of the lesion. Shock is not a contraindication to immediate operation. As Deaver states, it is safer to subject the patient to the added burden of an operation than to the added burden of continued hemorrhage. Transfusions before, during, and after operation are advisable where there has been considerable blood loss. Autotransfusions have been used, but are indicated only if blood cannot be obtained from other sources; and then care must be taken to ascertain that there is no injury to hollow viscera.

Postoperative measures are aimed at treatment of the damaged liver by glucose intravenously, the treatment of the anemia, and the prevention or treatment of ileus and distention by adequate measures. All aid in the reduction of mortality in these cases.

REPORT OF CASE

A. S., age 21, admitted to hospital at 7:45 p. m., following an automobile accident on July 20, 1938. I first saw the patient at 9 p. m., at which time he was complaining of severe pain in abdomen and right shoulder. Examination revealed a well-developed and nourished white male, obviously in shock. Skin was cold and clammy.

Head: Abrasion on right side of face; laceration of chin.

Lungs: Clear to auscultation and percussion.

Cardiovascular: Heart rate regular. Tones poor. Blood pressure, 65/0. Respiration 40. Pulse not discernible.

Abdomen: Somewhat distended. Rigid in upper abdomen. Dullness in both flanks. Slight palpation or percussion over right upper quadrant caused severe pain.

Diagnosis.—Shock; probable ruptured liver.

Treatment.—Immediately instituted for shock. One thousand cubic centimeters of 10 per cent glucose in saline was given by vein. Blood pressure came up to 130/70 and pulse to 95. Red blood count revealed 2,500,000; 40 per cent hemoglobin; 22,900 white blood cells. The patient was typed for transfusion. The improvement was of short duration. The pulse and respiration became more rapid and weak. Blood pressure dropped again to 70/0. By midnight two donors had been found, so the patient was taken to surgery and transfused with 500 cubic centimeters of whole blood. Immediately, and without removal of the patient from the cart, he was anesthetized and prepared for exploratory laparotomy.

Operation.—Upper right rectus incision was made, and upon opening the peritoneum a large quantity of blood gushed forth. There was approximately 1000 to 1500 cubic centimeters of blood in the peritoneal cavity. The stomach and intestines were packed off, and exploration revealed two rents in the right lobe of the liver. One rent extended from the margin of the liver down to the cystic duct, the other rent was lateral to the first and only about four centimeters in length. Both were bleeding profusely. Both rents were closed with overlapping mattress sutures of plain No. 1. catgut, and the bleeding controlled. The patient's respiration had dropped to about 10 per minute, and general condition was so poor that immediate closure of abdomen by interrupted through and through sutures of No. 4 dermal was effected. Blood pressure during operation went from 100/98 to 62/40. Respiration ranged from 40 to 10.

Ten per cent glucose in saline continuously by vein was started immediately after operation. Condition remained precarious for twelve hours, but, finally, blood pressure came up to 110/70. On the afternoon following operation it was deemed advisable to transfuse the patient with 500 cubic centimeters of citrated blood. Red blood count, following this transfusion, was 3,250,000; hemoglobin 61 per cent. The temperature curve went up to 104.6, pulse 172, respiration 40, during the first twenty-four hours. On June 22, 1938, continuous gastric drainage was instituted because of ileus. This was relieved in twenty-four hours. On June 23, 1938, blood count revealed 2,600,000 red blood cells, 61 per cent hemoglobin, 7,200 white blood cells, so another 500 cubic centimeters transfusion was given. The patient continued to complain of pain in the left lower chest and left shoulder, and had a temperature of 102 till July 11, 1938, which was eighteen days postoperative. However, x-ray of the chest revealed no pathology, and diaphragm was at normal level. Shifting dullness in abdomen was to be found until July 15, 1938. The patient was discharged from the hospital on July 19, 1938, still jaundiced, but otherwise quite well, twenty-eight days postoperative. When last seen, on November 20, 1938, the patient was well and had been back on his regular job for a little over two months. His wound was well healed, without evidence of any hernia at that time.

COMMENT

More cases of this type should be explored. Shock, and what appears to be a hopeless situation, should not deter one from giving a patient the benefit of surgery. Careful attention to postoperative treatment undoubtedly plays a big rôle in the recovery of these patients.

Medico-Dental Building.

RECTAL FOREIGN BODY

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THE accompanying photograph, "believe it or not," shows an extraordinary foreign body removed from the rectum. It consists of a piece of garden hose, eleven inches long, and an inch and a quarter in diameter, the distal end of which had been split up six inches, a longitudinal strip removed, and it was then bound tightly with cord to close the lumen. A yellow toy balloon, filled with water, had been drawn over the hose, the neck being tightly tied to prevent escape of the water. The balloon had on it a picture of the Golden Gate Bridge.

REPORT OF CASE

On the morning of July 26, 1938, the patient, a man, age 59, stated he was using the instrument "to massage the prostate"; and as he stepped out of the bathtub he fell on the edge of the tub, forcing the entire gadget into the rectum. Eight hours later I was consulted, and could just reach the hose by digital examination. It was easy to remove by grasping it with a Kocher hemostat. Although the upper end had entered the gut fourteen inches, no perforation resulted—probably due to the soft, smooth water-filled tip of the balloon.

This is, no doubt, the first time the Golden Gate Bridge has been pulled out of the rectum!

450 Sutter Street.

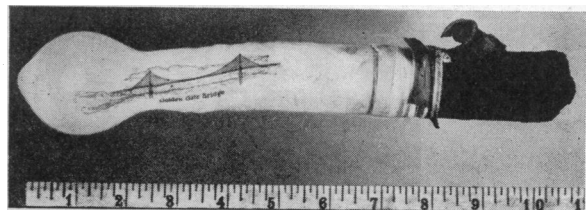


Fig. 1.—Rectal foreign body.